CLAIM AMENDMENTS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method comprising:
communicating ~~an~~ a combined Internet Protocol (IP) signal and an Asynchronous Transfer Mode (ATM) signal via an optical medium, wherein the ATM signal is phase modulated based on the IP signal.

2. (Previously presented) The method of claim 1 wherein the ATM signal is phase modulated based on the IP signal without exceeding a specified tolerance of symbol period of the ATM signal.

3. (Previously presented) The method of claim 1, wherein the phase modulating encodes multiple bits of the IP signal per pulse in the ATM signal.

4. (Previously presented) The method of claim 1, wherein the phase modulating encodes two bits of the IP signal per pulse in the ATM signal.

5. (Previously presented) The method of claim 1, further comprising forming a combined ATM/IP signal by modulating a phase of the ATM signal based on the IP signal.

6. (Previously presented) The method of claim 1, wherein the ATM-based network comprises a G.983-based network.

7. (Previously presented) The method of claim 1, further comprising:
communicating the ATM signal and the IP signal to a first location and a second location.

8. (Previously presented) The method of claim 1, wherein the ATM signal and the IP signal are communicated via a passive optical network.

9-11. (Canceled).

12. (Previously presented) An optical network termination (ONT) to extract an Internet Protocol (IP) stream from a received signal, the ONT comprising:

a phase demodulator adapted to:

phase demodulate a combined Asynchronous Transfer Mode (ATM)/Internet Protocol (IP) signal to extract the IP stream, wherein the combined ATM/IP signal has been received and wherein the combined ATM/IP signal comprises an ATM signal that has been phase modulated based on an IP signal.

13. (Previously presented) The ONT of claim 12, wherein the phase demodulator is further adapted to decode multiple bits of the IP stream per pulse in the combined ATM/IP signal.

14. (Previously presented) The ONT of claim 12, wherein the phase demodulator is further adapted to decode two bits of the IP stream per pulse in the combined ATM/IP signal.

15. (Previously presented) An apparatus to communicate an Asynchronous Transfer Mode (ATM) signal and an Internet Protocol (IP) signal, the apparatus comprising:

an optical line terminal (OLT), the OLT comprising a phase modulator configured to phase modulate the ATM signal based on the IP signal to produce a combined ATM/IP signal, the OLT further to output the combined ATM/IP signal.

16. (Previously presented) The OLT of claim 15, wherein the phase modulator is further configured to phase modulate the ATM signal based on the IP signal without exceeding a specified tolerance of symbol period of the ATM signal.

17. (Currently Amended) The OLT of claim 15, wherein the phase modulator is further configured to encode multiple bits of the IP signal per pulse in the ATM signal.

18. (Canceled).

19. (Previously presented) A method of communicating an IP stream, the method comprising:

extracting a first IP stream from a combined Asynchronous Transfer Mode (ATM) signal/Internet Protocol (IP) signal received at a first location, wherein extracting the first IP stream comprises phase demodulating the combined ATM/IP signal;

wherein the combined ATM/IP signal comprises an ATM signal that has been phase modulated based on an IP signal.

20. (Previously presented) The method of claim 19, further comprising extracting a first ATM stream from the combined ATM/IP signal received at a second location, wherein the extracted first ATM stream is specific to the second location.

21. (Previously presented) The method of claim 20, further comprising extracting a second ATM stream from the combined ATM/IP signal received at a third location, wherein the second ATM stream is specific to the third location.

22. (Previously presented) The method of claim 19, further comprising extracting a second IP stream at a second location by phase demodulating the combined ATM/IP signal.

23. (Previously presented) The method of claim 22, wherein the first IP stream is specific to the first location and the second IP stream is specific to the second location.

24. (Previously presented) The ONT of claim 12, wherein the extracted IP stream is specific to the ONT.